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DISCIPLINE vs. DISSIPATION IN SECONDARY EDUCATION

I ENVY the perennial youthfulness of heart of those who come up to the discussion of large educational problems year after year with unabated zeal. I recognize the necessity of the work. Though we cannot hope to mold opinion or shape practice into perfect accordance with our own best insight and judgment, every judicious and well-weighed utterance does something perhaps to stem the rising flood of incoherent and irresponsible gabble that threatens to submerge us all. And so, recognizing how little we can achieve, we must nevertheless devote ourselves to the accomplishment of that little. Two things prompt these pessimistic utterances. First, the sheer multiplication of hasty unconsidered discourse designed simply to fill the programmes of our meetings and the pages of our too numerous educational journals; and second, the fact that behind the clamorous babel of contending opinions there is an opposition of interests which it is idle to dissimulate. The first condition makes it almost impossible for serious and thoughtful utterances to receive the consideration and attention that they merit. If published, they are lost in the deluge of unread printed matter. And in the oral debates of our educational congresses my observation has been that, after a few hours of strenuous discussion, the weariness grows so great that the audience thankfully welcomes any diversion in the way of irrelevant rhetoric, humorous display of character or ingenious retort, and those who have the skill to entertain their tired fellows in this way rarely resist the temptation to employ it. But the general theses debated in our educational gatherings are almost always ambiguous in expression and application, and require to be narrowed down to their precise practical meaning and effect by a severe and conscientious dialectic. The natural impatience of the human mind makes this task of distinguishing, discriminating, and defining, difficult enough. Disloyal or capacious polemic insisting on lapses of an opponent which do not effect his main contention, bursts of inopportune eloquence, amusing digressions, and elaborately figurative language, make it quite impossible. To object to these things singly at the moment is ungracious ped-

antry. In their joint operation they are the cause of the futility of so much of our educational discussion. It would be invidious, perhaps, to do more than touch on the other consideration, the opposition of personal interests that underlies much of our dissidence, yet perhaps it is better to acknowledge and face our temptations than to hide them in unctuous commonplaces about the *commune vinculum* of all higher intellectual pursuits. The multiplication of departments in our larger universities leads to what, blink it as we may, is a virtual struggle for existence, and competition for endowments, fellowships and students. And this, by a traceable chain of causation, affects opinion and discussion concerning the curriculum of the high school and the early years of college. If a subject is not taught in the high schools, and in the freshman and sophomore classes of colleges, the opportunities of graduate students and the inducements to undertake graduate work in that department are thereby limited. I would not for a moment suggest that this motive consciously determines the educational views of any of us. But two stubborn facts remain. The obvious and importunate interest is there, exercising its continuous pull; and the educational debates of the last few years have more and more centered about pleas for the introduction into the high school, or early collegiate years of studies hitherto confined to the senior and junior years of college, or to the graduate school. The recognition of these subjects in the higher education has been won, and with the prestige of that victory they move forward to the conquest of the secondary school. The obvious answer is that this is a natural and inevitable development of the spirit of progress and democracy, and that personal or interested motives have precisely as much or as little to do with it, as they have with the pertinacity of the professors of Latin, we will say, in defense of their profitable monopoly in the earlier years of the educational system. I grant that this is a perfectly adequate *tu quoque* retort. My object, however, is not recrimination or the imputation of self interest to any party. But as the student of psychology or sociology is introduced to his subject by a consideration of the special forms of illusion, bias, or prejudice, that are likely to embarrass his progress, so, in approaching this delicate and difficult problem, I desire to have clearly present to our minds the peculiar obstacles that stand in the way of a perfectly judicious and impartial solution.

The fundamental educational issue to which this way of approach

has brought us is that of the affirmation or denial of the modern thesis that all studies are essentially equal. Now this proposition, like the axiom that all *men* are born free and equal, I hold to be hopelessly equivocal. It can be properly discussed only by means of careful definitions and distinctions. It starts of course with the rhetorical advantages of its association with "liberty, equality, fraternity," progress, evolution, regard for the individual, rejection of narrow mediævalism, and many other commendable words and phrases. But I am going to assume that while this audience retains enough of the original Adam to enjoy good rhetoric, its opinions are not necessarily determined thereby. I believe that all departments of study are or should be equal before the president and board of trustees of the university, and in the esteem which the public entertains for their trained and highly specialized representatives, just as I believe that all *men* should be free and equal before the law and in the enjoyment of the courtesy and consideration due to our common humanity. I will admit that all studies do, or at least may conceivably, yield equal intellectual discipline to those who with adequate previous preparation pursue them systematically and scientifically to the attainment of a reasoned mastery. I will grant, too, that, just as in literature or art, *le chef d'œuvre vaut le chef d'œuvre*, and we cannot wisely say that the great symphony is inferior to the great poem or the perfect statue to the perfect picture, so also regarded merely as material of construction in humanity's palace of art and science, considered merely as knowledge or information, the *matter* of one science is, in its own place, and as an indispensable complement of our total conception of the universe as worthy and as significant as that of another. But even the sonorous eloquence to which we have had the pleasure of listening today fails to convince me that these propositions, taken singly or collectively, amount to a proof of the precise thing which was to be proved by the advocates of the doctrine in question, namely, that all studies which have obtained a lodgment in the graduate schools of our great universities are of equal educational value in the first half of an eight years' course devoted to non-technical and non-professional education.

Another plausible prepossession with which much rhetorical play can be made before popular audiences is the demand for fuller recognition of the idiosyncrasy of the individual student. The intellectual aptitudes of boys are as diverse, we are told, as the color of their hair

and eyes or the shapes of their heads. It is a cruel wrong and a stupid misapplication of faculty to set Tom Tulliver to conning the Latin grammar while all his mechanical cleverness and capacity for affairs are running to waste. It would be easy to quote volumes of indignant eloquence to this effect. But let us keep to the point. We are not talking of life in general (our students *live* outside of the school), nor of education in general, nor of preparation for life in general, nor of boys who ought to receive a good common-school or high-school education and then pass through the business college or technical school to their trade or profession. We are not prescribing for the genius who, without ever crossing the threshold of either college or academy, rises to the control of the railroad systems of a continent or learns to sway listening aldermanic councils by his eloquence. Nor for the genius of another type, who is imperiously impelled from his earliest years to carve, sing, or paint, and is recalcitrant to all our formal discipline. We are speaking solely of the wisest choice and grouping of studies in a curriculum designed for the limited number of those who can profitably devote eight years to non-professional education. And, speaking with this limitation, I totally deny the coincidence of an *incapacity* to learn elementary mathematics and master by scholastic methods the elements of one or two foreign languages with the *ability* for the serious prosecution of other studies. The contrary opinion will always enjoy a superficial popularity. We like to imagine that the depths of our own personalities are truly abysmal, and, like the hypochondriac old ladies of *Middlemarch*, we are pleased by the deference shown by our physicians, whether of the body or of the mind, to the phenomenal peculiarity of our own constitution. There are doubtless dull and lazy boys incapable of concentrated attention and consecutive thought who cannot or will not learn their algebra or geometry, and who are flattered by the illusion of progress which the less definite and precise tests of some other studies permit them to cherish. There are dreamy boys with a pretty taste for poetry, history, and romance who if encouraged will rush to cull the flowers of a superficial literary culture, neglecting the laborious cultivation of the roots. There are boys like Martin the madman in *Tom Brown*, with a fancy for collecting plants and gathering a menagerie about them, who can doubtless derive much pleasure and pick up some information by unsystematic cultivation of the field of the descriptive and classificatory sciences. I admit, too, that

genius for the higher mathematics and the peculiar verbal memory that leads to polyglot facility or great philological attainment are rare and special gifts. But the boy who cannot learn elementary algebra and geometry, and can master the logical methods of the exact sciences, the boy who cannot learn to construe a modicum of Latin and French and *understand and enjoy the author he reads* in the process, but who is endowed with a mysterious precocity for psychology, sociology, political science, and history—that boy is either an educational myth or a malingerer who would be very much amused to find us taking him so seriously.

Before passing from this preliminary survey of the chief popular prepossessions against the principle of the resolution before us I wish to make a few reservations with regard to its wording. “Preëminence” does not mean exclusive dominance, as some of the speakers seem to think. The demand for six years of mathematics need not mean six years of pure mathematics, but may well include two or three years of equally severe discipline in the fundamental exact science physics, and perhaps in the elements of astronomy. When the essential principles of practical grammar and rhetoric have once been mastered, that portion of the instruction in English should henceforth be given incidentally in connection with the criticism of the *English essay*. The requirement of the formal study of English literature may reasonably be somewhat relaxed in the case of students who elect both Latin and Greek, and who, if properly taught, will get much of their training in both English and literature through the classics, a topic I have developed elsewhere and cannot enlarge upon here. In short, the principle of the preëminence of English, mathematics, and two foreign languages simply means that serious continuous work along these lines must not be interrupted by experimental attempts to find a place in the curriculum for the ten or fifteen departments that are descending from the university to compete in this arena. Thus far the majority of the supporters of the resolution would probably concur with me. In a further reservation that I must make I regret to go counter to a large and respectable body of opinion. It is this: I would substitute for “high school course” *preparatory collegiate course*. For students whose education ends at the age of eighteen or earlier I should perhaps make the second language and all mathematics beyond elementary algebra, geometry, astronomy, and physics optional. And, while I should insist even for them on some central core of disciplinary

study (without which I hold it to be axiomatic that information will simply prove misinformation and mental deformation), I should be inclined to make concessions to the alleged popular demand for obviously practical and informational courses. I should endeavor, however, to postpone the beginning of the divergence between these two courses of study at least till the end of the first year of the high school. And even then I should so limit it as to reduce to the practicable minimum the difficulties of readjustment in case of a change of plan. But the simplest common sense shows the necessity of some divergence in preparation for alternative types of education. Nor can I feel the justice or cogency of the claim that we ought to deny to all students the intellectual economy of the nicer adaptation in order to relieve the few who have neglected to plan or have erred in their choice, of the comparatively slight burden of the readjustment of their work. I am, indeed, amazed at the intensity of apparent conviction and the tenuity of justifying argument with which this cry for an identical education for all classes of students is vociferated from many quarters. The colleges, we are told, must not prescribe but conform to the high schools; the educational edifice should not be constructed from the garret down. But the fact is that it is the unwiser representatives of the high schools, who by declining to recognize and provide for the needs of a perfectly practicable classification of their own students are trying to prescribe limits to the future work of the colleges. And if we must be figurative and architectural the pertinent parallel is that of the builder who, having a four-story and an eight-story edifice to erect, refuses to put into the foundation of the taller structure the steel rails and cement that are needed to support it in a soft and yielding soil.

The practical difficulties of establishing and keeping up two parallel courses are greatly exaggerated. They tell us that they cannot afford to maintain a preparatory collegiate course which will involve two or three extra classes and in the same breath propose to meet the needs of the individual student by adjusting themselves to every caprice of special aptitudes discovered in himself by any boy who grows weary of mathematics and construing.

I and my friends fitted for Harvard and Yale in the old Chicago High School side by side with other friends pursuing a partly different course. The additional expense to the institution was slight. The *ipse dixit* of those in authority will not convince me that it is or ought to be prohibitory, and the difficulty of supplementing or adjusting the

work of the school to meet the demands of the colleges is not serious to any boy possessed of sufficient intelligence to be a desirable recipient of a college education. Much loose declamation on this theme goes unchallenged, and telling points are made against the colleges by comparative tabular views of their varying requirements. But all this comes from looking at the matter in a purely mechanical and external way—from the point of view of a candidate who, conscious that his scholarship has no solid foundation, pores over catalogues and examination papers in order to ascertain which net he is most likely to slip through by a combination of judicious cram and happy accident. I grant that greater uniformity in minor requirements is desirable, and that the examination test is by no means infallible; but, speaking broadly, the boy who is really fitted for any first-class college in mathematics, Latin, and English will get into any other. Whatever the catalogues may say, the colleges are not really asking each for a special and peculiar brand of Latin, mathematics and English. They are only too happy to admit the boys who show real intelligence and grasp of the essentials. The claim that all high-school graduates ought to be able to walk into any college “as into a mill,” as the French have it, I reject *in toto*. Such a principle would simply foster the growth of an educated proletariat. We college professors naturally find our account in large classes. But it is not necessarily the interest of the nation that large numbers should go to college instead of receiving the education of the technical school or business college or that of practical life. The higher interests of the nation demand only that the college education prove effective for those whom opportunity or aptitude mark out for its fit recipients. The remedy for false tendency and misdirection in these matters is not to debase the peculiar type of college education by mistaken concessions, but to give a sound practical education in the public high schools, technical schools, and manual-training schools to those who desire nothing more, and preserve the colleges as the nurseries of the higher intellectual life of the nation. “But why,” my opponents will impatiently ask, “why this perpetual question-begging assumption, that these particular studies will, beyond all others, foster the higher intellectual life of the nation?” Let me again point out that the assumption is not so broad as this. There is no claim of an absolute and metaphysical superiority for these studies. It is merely affirmed that experience shows that they supply the best attainable discipline in the first half of the curriculum which is *ex hypothesi*

non-professional and extends over eight years. There is no lack of familiar arguments to support the proposition thus limited. I can only glance at the more important here. In the case of mathematics I presume the point need be argued only for form's sake. I need hardly enlarge on the disciplinary value of mathematics in fixing a wandering attention and accustoming the mind to following and retaining long chains of exact reasoning. Nor need I labor the point that so much mathematics as is here contemplated is an indispensable propædæutic of any study of the sciences that goes beyond herborizing and the collecting of butterflies. Nor is any one likely to deny the value, merely as information, of a knowledge of algebra, geometry and the elements of mechanics and astronomy. And the adaptation of mathematics to precise methods of teaching and testing is a truism. The objection that practical life requires only a little ciphering does not lie in the mouths of the representatives of high-school and collegiate education. For we all know that if practical life means accumulating a million, or bossing a city council, then practical life does not require even a high-school education.

The real issue, then, is the question of language. I have already indicated that I should favor a minimum of one foreign language for an education that ends with the high-school. It remains to argue that the conditions of our higher intellectual life make a minimum of two foreign languages an indispensable staple of the earlier years of a liberal education. We cannot demonstrate such a proposition geometrically. But we can lay down a few postulates and exhaust a few alternatives. One foreign language seriously studied is of course absolutely necessary. Without that no man can understand the general logic of language, the structure of our own derivative and highly composite idiom, and, what is perhaps hardly less essential in this age of cosmopolitan literature and frequent translations, the very meaning, capacity and limitations of translation from one idiom to another, and the mutual influences and interactions of related and associated literatures.

The claims of a second language must rest on other than these general disciplinary values. They are not hard to discover. Nothing but imperious necessity can justify the omission of Latin. But if Latin is elected, the student can hardly dispense with a firm grounding in at least one great modern language by way of introduction to our cosmopolitan and complex modern world of thought, even if we

assume that he may safely be left to pick up a working knowledge of others in later years. On the other hand, if we concede to imperious necessity the omission of Latin it must mean extreme specialization in the physical sciences. For specialization in the historical and philosophical sciences without Latin would be an absurdity. But the specialist in the physical sciences surely needs both French and German as tools. And if he is to have anything deserving the name of a liberal education, he must push beyond the command of these languages as tools to the study of German and French literature. On either alternative then we get a minimum of two languages. Such formal reasoning will not go far to persuade those who are not already convinced. But, indeed, I am embarrassed by the obviousness of my main contention, when once misunderstandings and prejudices are cleared away. And in the few minutes that remain I must limit myself to a brief indication of what seems to me the central misconception of those who declaim against the prominence assigned to the scholastic study of language in youth.

It has become a wearisome commonplace of recent psychological and pedagogical literature to urge that the study of words without things impairs the vigor of the mind, that thought depends upon sensation, and that we must lay a firm foundation in perception and observation before we erect the superstructure of reflection. There is a mob of writers in the educational journals where entire stock in trade is the repetition of these truisms. The Boston school children who had never seen a cow or a pig are made to point many a pedagogical moral and adorn many a psychological tale. Perhaps the flower of this literature is a recently published quaint jumble of secondhand physiological psychology, pedagogy and literary gush of which the main thesis seems to be that the supreme genius of Shakespeare was in large measure due to his familiarity with the wild flowers about Stratford-on-Avon. Now I have not a word to say in disparagement of the kernel of obvious truth contained in all these platitudes. And it may be that in some quarters there is need of this reiteration of the self-evident. But there is another aspect of the mental life which these repetitious denunciators of what they call a verbal and bookish education ignore. The reflective faculties no less than the perceptive may be atrophied and their development stunted by lack of exercise in the plastic years of youth. It is axiomatic that the abstractions of any given subject should be presented only after the corresponding concrete perceptions

have been acquired. But it by no means follows that a healthy child of ten is better employed in testing the starch of potatoes with iodine, or in building geometrical block houses than it would be in learning to read and cipher. If thoughts without intuitions are empty, intuitions without thoughts are blind. In three cases out of four the iodine game will deposit in the child's mind a memory image of blue and nothing more. The children of all but the totally disinherited classes derive from the inevitable experience of life a quite sufficient stock of sense impressions with which to begin the discipline of the intelligence. The neglect or undue postponement of that discipline for the sake of building up an unnatural and artificial sense experience is a dubious educational experiment and not a postulate of sound psychological and scientific method as it has been pompously proclaimed. What constitutes the difference between the young Englishmen who go out from Oxford or the civil service examinations and the barbarians they dominate, often their superiors in quickness of perception and in many attributes of the physical man? What is the difference between a physically vigorous and alert modern laborer and one of the leaders of modern civilization? It does not lie mainly in keenness of sense perception or in the store of sense memories. It lies in the subtle and often distorting elaboration of sensations and sense memories in the mind, in the establishment of a vast network of connecting relations between them. It is the extent, the delicacy, the precision, the just and exact functioning of this correlating internal mechanism that distinguishes the civilized and effective man. Even in the field of the physical sciences it may be doubted whether the educational shibboleths of the hour are not working harm by this rhetorical exaltation of sense perception above thought. I have been told by thoughtful men of science that it is quite as possible to have too much laboratory work as too little; and that much of the "experimenting" done by American high-school and undergraduate students is essentially of the nature of kindergarten play. The great discoverers have often been awkward manipulators, and despite the contrast so often thundered in our ears by the official orators of science between the moderns who experiment with things and the ancients who spun the world out of their inner consciousness, it would appear, if my informant has not misled me, that discoveries are still made as well by "intending the mind" as by staring at a test-tube. The testimony of the leading men of science in the Royal Society is that with advancing mastery their "mind stuff" comes

to consist less and less of clumps of sense images and more and more of symbols and fine-spun threads of relations. Now all this is no argument against the early education of the senses, or against furnishing the youthful mind with a good stock of vivid sense images and concrete experiences. If, like the Boston school children, your pupils will not confess to having seen a cow, let them go and look at one on the first opportunity. And if, to quote the report of a noted kindergarten, they have never "observed the softening effect of water on vegetables," get the cook to demonstrate it at her earliest convenience.

But while we are educating the central nervous system in the reception and retention of sense images, let us see to it that we do not let slip the few short years in which it is possible to establish lines of intellectual relations between sense images, and gradually elaborate the raw material of thought into the higher more economic and more effective form of ideas. A man who is incapable of apprehending a nice distinction or grasping a general proposition is surely as unsatisfactory an educational product as a child that has never applied the iodine test to potatoes. And we shall woefully multiply the number of such stunted intelligences if in obedience to the demands of a fanciful psychology we postpone all serious exercise of the higher intellectual powers until the child is supposed to have acquired the sensational elements of all arts and sciences. For the hardening brain that has begun to set and take its ply opposes quite as much resistance to the opening up of new lines of internal communication as to the reception of fresh impressions.

Now I know not what wrongs they suffered in youth, the gentlemen to whom the praise of language and the study of language is as a red rag to a bull. There is no lack of bad teaching in the world. But I know that the scholastic study of languages accompanied by the translation and close interpretation of good literary texts is on the whole the best educational instrument at our disposal for the stimulating and development of those higher mental activities on which I have been dwelling. It is a daily and hourly exercise in mobilizing, synthesizing, refining and elaborating, coloring with moral and æsthetic associations, and correlating in countless ways the raw material of our limited personal experience.

Every transparent etymology on which the student's eye falls as he turns the pages of Lewis and Short or Liddell and Scott, every curious derivation explained by the teacher to relieve the tedium of class-

room drill is a lesson in psychology, a concrete illustration of the associational processes by which the human race has in fact built up out of sensation the entire superstructure of moral and spiritual ideas. Every hour spent by the student in improving the accuracy or elegance of his version is, apart from its practical service in mobilizing his English vocabulary, an unconscious philosophic discipline in the comparison of two sets of conceptual symbols and the measuring against each other of two parallel intellectual outgrowths of the one sensational root of all our knowledge. Every time the student is corrected for washing out in his translation some poetic image found in the original he receives a lesson in the relation of the symbolizing imagination to thought. As often as he discusses with the teacher a word for which no apt English equivalent can be found he acquires a new concept and a finer perception of nice distinctions. Whenever an apparently grotesque or senseless expression is elucidated by reference to the primitive or alien religious or ethical conception or institution that gives it meaning he receives a simple, safe and concrete lesson in comparative religion, ethics, folk lore, anthropology or institutional history as the case may be. And as often as he is forced to reconsider in the light of the context the mechanically memorized meaning of a word or phrase he has impressed upon his mind the truth, which the student of the more rigid working formulas of the physical sciences is so apt to miss, that words are not unalterable talismans, but chameleon-hued symbols taking shape and color from their associates. The effect of this kind of discipline is unconscious, insensible and cumulative. It cannot of course cancel the inequalities of natural parts; it cannot take the place of practical acquaintance with life and accurate knowledge of a special trade or profession. But pursued systematically through the plastic years of youth it differentiates the minds subjected to it by a flexibility, delicacy and nicety of intellectual perception which no other merely scholastic and class-room training can give in like measure.

This scholastic study of language, through the careful interpretation of selected literary masterpieces, is a totally different thing both from mere gerund-grinding and the acquisition by conversational methods of the courier's polyglot facility. It is essentially a study of literature—a fact overlooked by those who declaim against language while protesting their devotion to literature; and it is the only form in which literature can be taught to young students that offers serious

guarantees of the indispensable accompanying discipline. It trains the intellect in close association with the sense for beauty and the sense for conduct as no other studies can. It is the method and not the particular language chosen that makes such study a discipline in the humanities. Nor can the omission of such humanistic study in the formative years be atoned for by crowning the edifice of pure physical science with a brand-new scientific ethics, æsthetics, sociology, and pedagogy at the close. The iridescent threads of cultivated and flexible æsthetic and ethical intuitions must be shot through the intellectual warp of the mind at the loom. They cannot be laid on the finished fabric like an external coat of paint. The student who between the years of twelve and twenty has thrilled at the eloquence of Cicero or Demosthenes, has threaded the mazes of the Platonic dialectic, has laughed with Aristophanes, has pored over the picturesque page of Livy, or apprehended the sagacious analysis of Thucydides, has learned to enjoy the curious felicity of Horace and the supreme elegance and tender melancholy of Virgil, has trembled before the awfulness of the clash of destiny and human will in the drama of Æschylus and Sophocles, has been cradled in the ocean of Homeric song, or attuned his ear to the stately harmonies of Pindar,—the student, I say, who has received this or a like discipline in the great languages and literatures of the modern world, has insensibly acquired the elementary materials, the essential methods, and the finer intuitive perceptions of the things of the spirit, on which all more systematic study of the mental and moral sciences must depend.

The student who approaches these subjects without this preliminary training in language and literature is so lacking in the sense for the apprehension of their nicer phenomena and subtler laws that it is impossible even to explain to him where his deficiency lies. He has not mastered the grammar of their expression or the elementary logic of their method. Nothing less than the absolute necessity of taking the time for more essential things could justify the omission of this humanistic preparation for specialism in the only years in which it can be successfully assimilated by the mind. There is no such necessity. The opponents of the predominance of language and mathematics in the years under consideration are at present agreed only in combining against that predominance and in pleading each for the introduction of his own hobby. They have no equally definite, difficult, and disciplinary subjects to substitute, and if we concede their principle of the equality of all studies, the educational Canaan which they prophesy

may or may not be entered by posterity, but we shall certainly wander more than forty years in the wilderness.

The place now occupied by languages and mathematics is not needed by the experimental sciences. It is still possible, though languages and mathematics (including physics) predominate in the first six years of the course, to lay a sound foundation in physics and chemistry on which to build up in the later years. The claims of the mental and moral sciences to the place have recently been pressed by very able men. It is hard to take them seriously. If these studies are to be pursued in the light of history and experience and not constituted *a priori* with the aid of strained analogies borrowed from the physical sciences, they demand, as we have said, at least so much of the logic of expression, so much of the analysis of the forms and instruments of thought, so much practice in the great art of interpretation of texts and contexts, so much flexibility of mind resulting from familiarity with various ideas in various dress, so much acquaintance with the best that has been thought and said in the world as would be given by six years of continuous study of language and literature in youth. In fine, this pressure from above, that threatens to disorganize our secondary education, has not come, I believe, from the intelligent representatives of the exact physical sciences or of the old established historical sciences. It is exerted chiefly in the name of a confused and rhetorical ideal of a scientific and progressive education in which the less exact physical sciences and the younger and as yet imperfectly constituted mental and moral sciences are to hold the leading place. This grouping, which may or may not represent for the pioneers on the frontiers of exploration the method of progress, will be productive of nothing but confusion in secondary education. Its triumph here would mean the survival as the dominant type of western scholarship, of the superficial, rhetorical, boisterously radical, self-styled progressive, precocious, pragmatical all-knowingness, that even now threatens to make certain classes of our young people traduced of other nations. Let us hope for better things.

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